

Implementing Smart Growth

DOT Air Quality & Livability Conference

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Florence, KY



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U.S. EPA, Smart Growth Program

What is Smart Growth?

- Growth that benefits the economy, the community, the environment, and public health.
- Provides consumers with choices for housing, working, shopping, playing, and getting around.
- Follows well established principles and design techniques, but not one size fits all - each project conforms to the local character whether in an rural, suburban or urban setting.



Haile Village, FL



Mashpee Commons, MA



King Farm, MD



Carlyle, DC

US EPA and Smart Growth

- US EPA's mission is to protect the environment and public health
- How and where we build have direct and indirect effects on the natural environment and public health
- Not all development affects the environment and human health in the same ways. As communities think about how to grow, they are looking for strategies that protect the environment while accommodating new growth.
- The EPA promotes Smart Growth as a land use and development strategy through its Office of Policy via outreach, education, research, policy and technical assistance.
- The EPA is a Partner member in the Smart Growth Network – www.smartgrowth.org.



Haile Village, FL



Mashpee Commons, MA

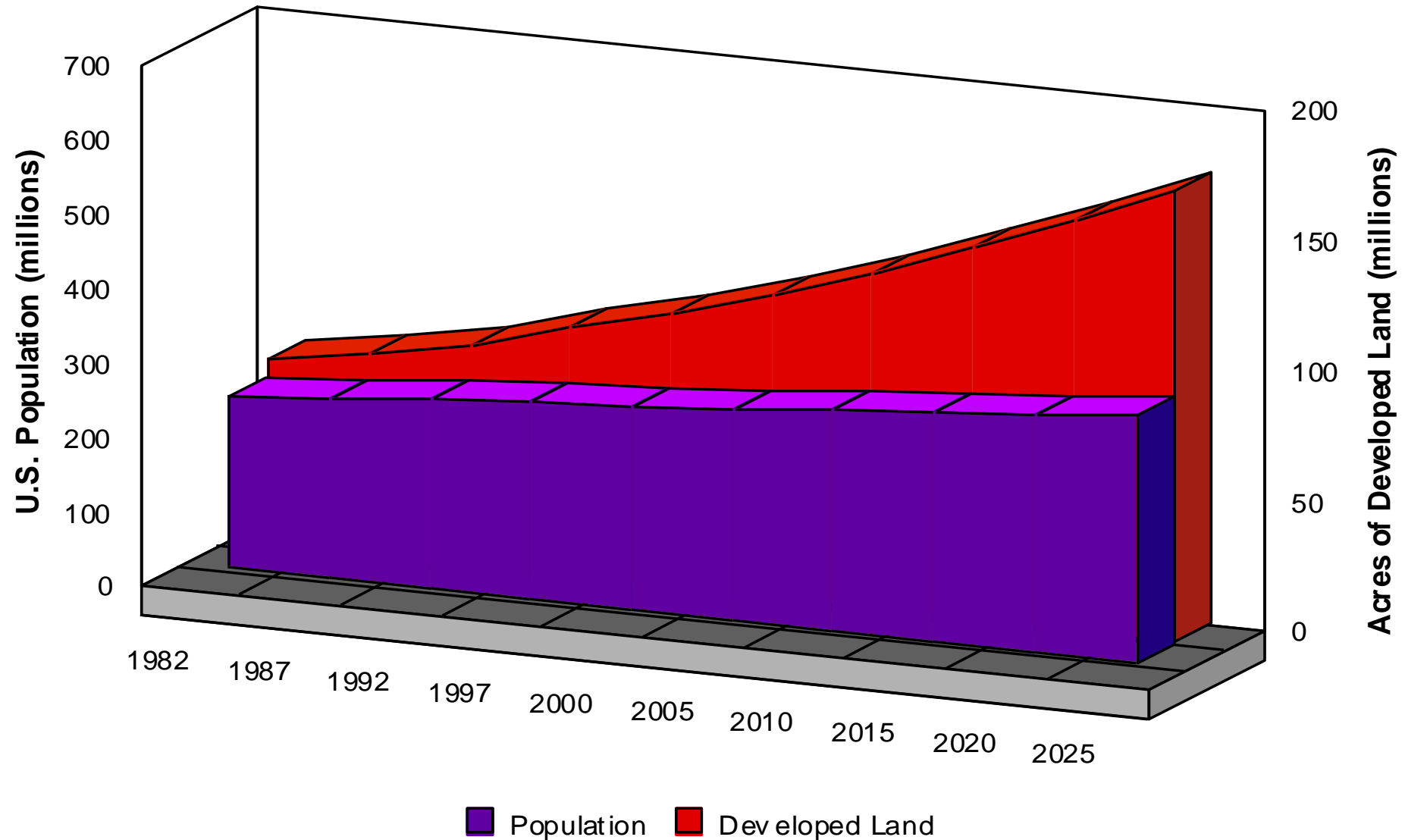


King Farm, MD



Carlyle, DC

Rate of Land Development vs. Rate of Population Growth



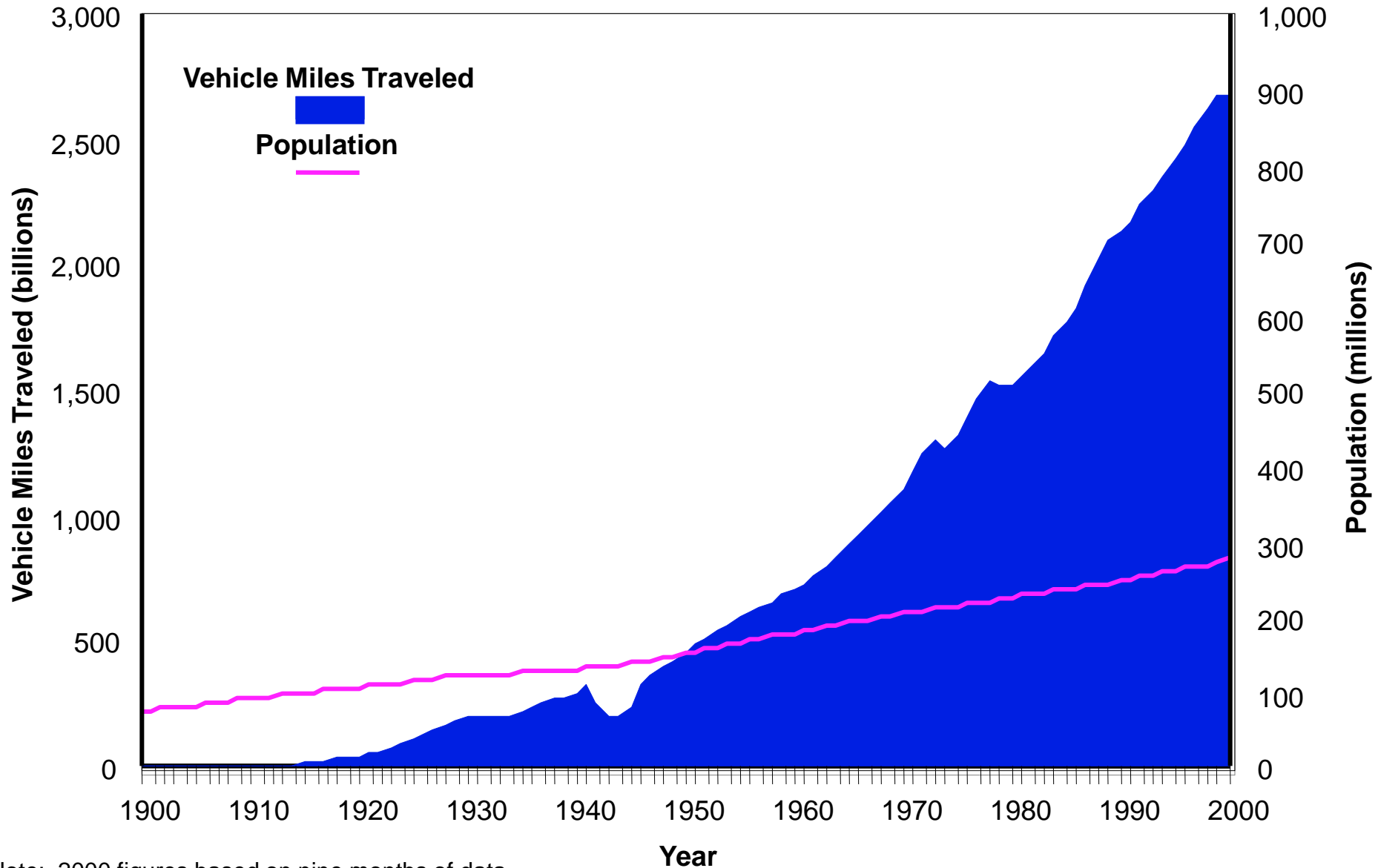
It's how and where we are growing that are driving our significantly increasing rate of land consumption, not domestic population growth.

Characteristic of development since WWII

- Low density
- Separation of uses
- Auto dependent
- Disinvestment of older communities



Trends in Vehicle Miles Traveled



Note: 2000 figures based on nine months of data

Source: Dana Beach, Pew Oceans Commission

No single factor for cause

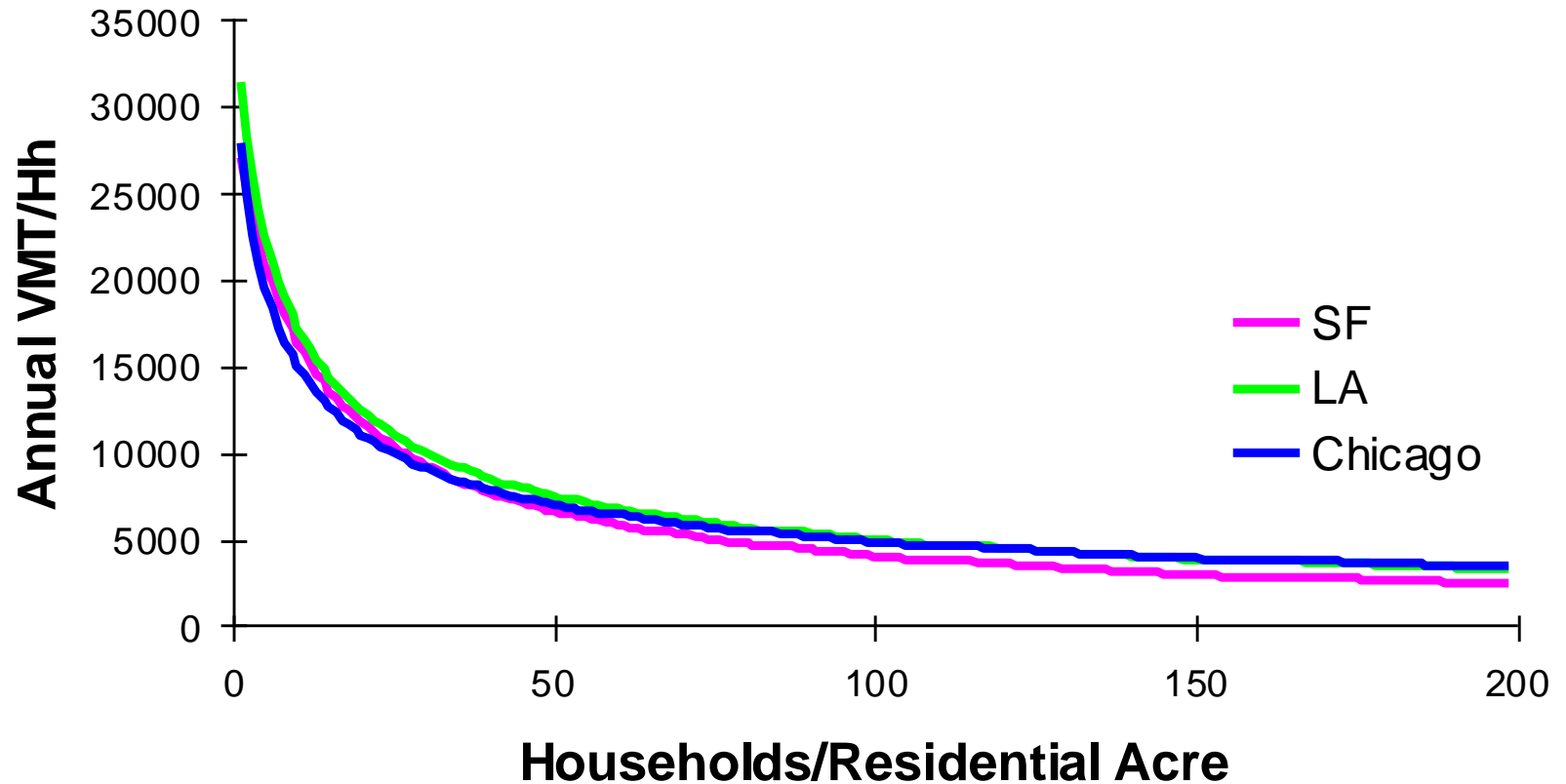
Land Use, Regional Growth and
Development Affected By:

- **Federal Policies**
- **State and Regional Policies**
- **Local Laws and Practices**
- **Action of Developers, Real Estate Investors**
- **Lending Practices**

Causes to environment and public health

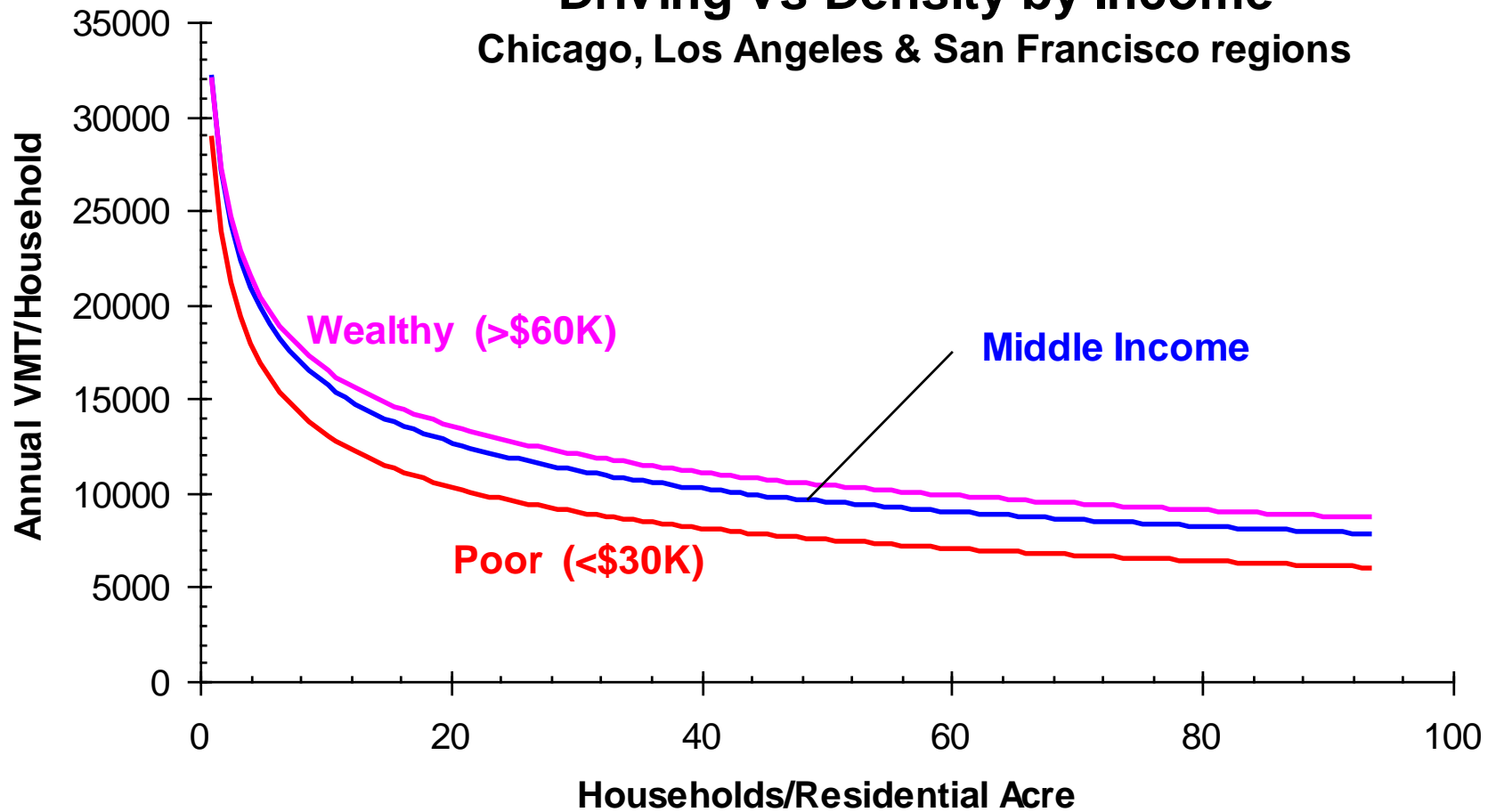
- Contaminated runoff and impaired water quality
- Growth in VMT and worsening air quality
- Loss of habitat
- Diminished access to nature
- Brownfields abandonment
- Increased risk of asthma and obesity

Driving vs Residential Density



Driving vs Density by Income

Chicago, Los Angeles & San Francisco regions



Reasons to change

- Traffic
- Budget and Taxes
- Environment and Open Space Preservation
- Affordable Housing
- Demographics
- Uniqueness of Place
- Getting it Right the First Time--Retaining Value
- The Market is There
- More Choices



Smart Growth Principles

- 1. Mix land uses.**
- 2. Take advantage of compact building design.**
- 3. Create a range of housing opportunities and choices.**
- 4. Create walkable neighborhoods.**
- 5. Foster distinctive, attractive communities with a strong sense of place.**
- 6. Preserve open space, farmland, natural beauty, and critical environmental areas.**
- 7. Strengthen and direct development towards existing communities**
- 8. Provide a variety of transportation choices.**
- 9. Make development decisions predictable, fair, and cost-effective.**
- 10. Encourage community and stakeholder collaboration in development decisions.**

Location matters

- Reuse, infill, extensions, and greenfield development within a regional context
- Location of sites and access to existing places and infrastructure are critical components of smart growth developments
- Developers and production builders are most active on greenfield sites
- Good design techniques and environmental outcomes are preferred even if location is not ideal



Remote



Greenfield

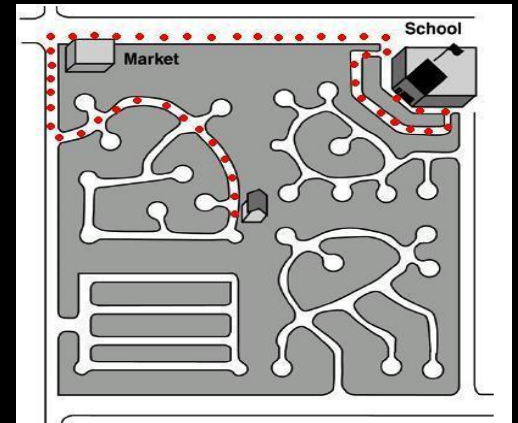
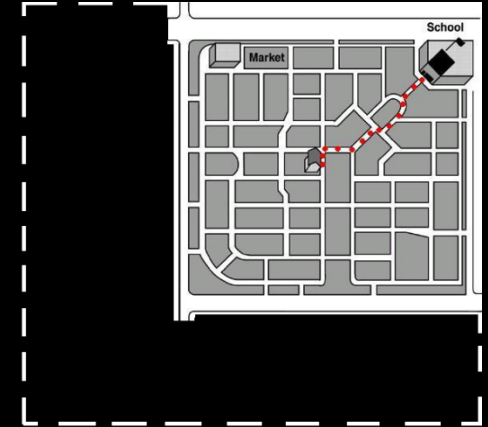


Extension

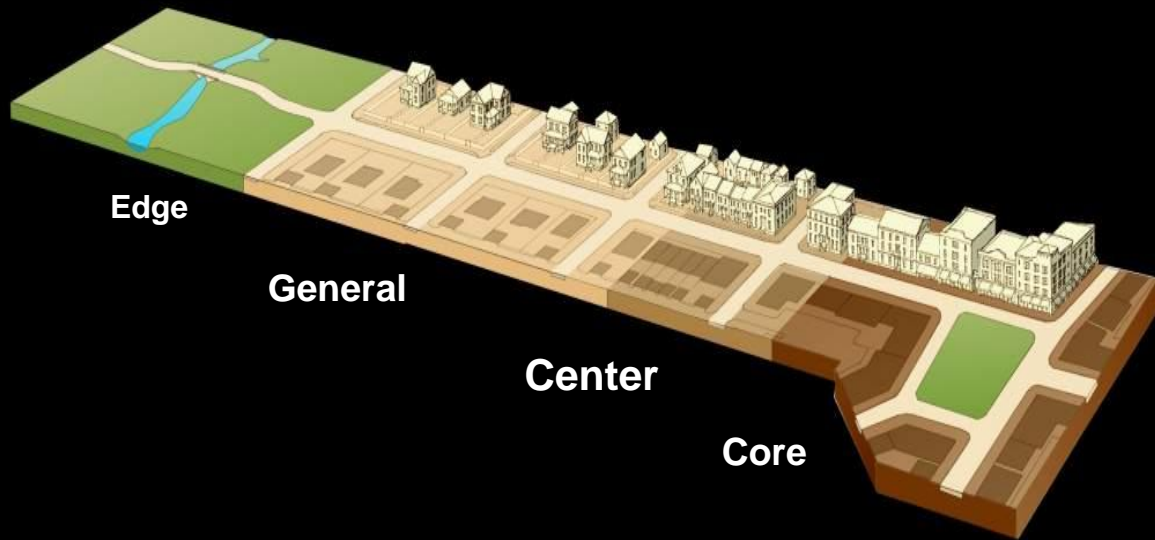


Infill

Same real estate, different arrangement



Smart Growth as Place Product



71 smart growth projects under construction 2000 to June 2004

Projects we examined:

- Smart Growth Principles
- Under construction or significant expansion between 1Q00 - 1Q04
- All real estate platforms
- Active amenity program
- Deal size to attract real estate industry
- Over 15 acres

Projects not considered:

- Piecemeal / no Smart Growth Principles
- Smart Growth Principles but:
 - Completed projects
 - Construction/expansion activity after 1Q04
 - Limited amenity program (second-home, Active Adult)
 - Deal size/location (remote), does not attract real estate industry, other special circumstances
 - Under 15 acres or single building in urban/MXD setting

Smart Growth geographic coverage

- South 32
 - Southwest: 15
 - Midwest: 12
 - Northeast: 7
 - Northwest: 5
 - Total: 71
 - Coverage: 24 States
-
- Most Active: Florida (9), California (9), Ohio (5), Texas (5), Colorado (4), Maryland (4)

Supply: The smart growth market for 2000-2004

- 71 projects under construction
 - Housing units
 - For-sale: 22,624
 - Rental: 11,335
 - Retail 6,395,153sf
 - Office & Industrial 17,205,280sf
- 71 projects upon completion
 - Housing units 95,701
 - Retail 23,046,592sf
 - Office & Industrial 48,853,453sf

National developers and production builders competing

- 190 local production and custom home builders
- Other (non-housing) real estate firms entering market:
- New Smart Growth-only developers and builders emerging
- Most active production developers and builders:
 - David Weekley Homes (3 projects)
 - DR Horton (also as Trimark Communities) (5)
 - Lennar (3)
 - Centex Homes (2)
 - John Laing Homes (2)
 - McStain Neighborhoods (2)
 - Others: Beazer Homes, KB Homes, KHovnanian, Newland Communities, Shea Homes, William Lyon Homes

Capital sources competing

- AIG
 - AmSouth Bank
 - Bank of America
 - Banner Bank
 - CalPERS
 - Citizens Bank
 - Comerica Bank
 - Cumberland Bank
 - Fidelity Federal
 - First Community Bank
 - Harbor Federal Savings & Loan
 - Huntington Bank
 - Johnson Bank
 - Manayunuk Bank
 - Michigan State Bank
 - Mid Valley Bank
 - National Bank of South Carolina
 - Ocean Bank
 - Pacific Continental
 - PacTrust
 - Portland Development Commission
 - Regions Bank
 - South Trust
 - Umpquah Bank
 - Union Bank
 - Union Planners
 - US Bank
 - Wachoiva Bank (2 projects)
 - Well Fargo (2 projects)
 - Willowgrove Bank
- (40 of 71 projects would not disclose)

Product types

- Large Land / Greenfield
- Suburban Infill
- Redevelopment / Re-Use
- Urban Infill <15-acres (not examined in this report)

Large Land/Greenfield

- Acreage: 600 to 6,000
- For Sale Housing (range): 100 to 12,000 units
- Rental units (range): 0 to 300 units
- Retail/Commercial (sf): 20,000 - 1,000,000
- Primary use: Residential

Stapleton, Denver, CO



- Developer Forest City Stapleton Inc
- Total Cost (est.) \$5 B
- Financing debt markets
- Acres 4,700
- Housing (units)
 - For-sale 8,000
 - Rental 4,000
- Builders: John Laing Homes, KB Homes, McStain Neighborhoods, Trimark (DR Horton), 12 others
- Retail 2 M (sf)
- Office/Industrial 10M (sf)
- Other amenities include Public Art Master Plan, K-12 schools, School for the Blind, Science & Technology School, other private schools, land dedicated for place of worship, 1,116-acre regional park system including parks, squares, plazas, trails, and water restoration.

New Town at St Charles, St Louis, MO



Phase 1 of 9

Image: Whittaker Homes

- Developer Whittaker Homes
- Phase 1 (of 9) \$200 M total cost
- Financing regional state bank
- Acres 726
- Housing (units) 5,700
 - For-sale \$120,000 - >\$1M
- Commercial 500,000 (sf)
- Other amenities include Six town centers, YMCA, five schools, three churches, parks
- **Notable: Ranked as the top-selling development out of 17,280 developments in 16 states, according to MarketGraphics survey (Apr-2006).**

Suburban Infill

- Acreage Range: 40 to 600
- For Sale Housing Range: 0 to 850
- Single Family Units: From \$200,000 to \$900,000
- Rental Units: 0 to 4,000
- Retail/Commercial (sf): 2,000 to 1,000,000
- Primary use: None. Site and market specific.

Birkdale Village, Huntersville, NC



• Developer	Crosland Pappas Properties
• Retail owner	Developer Diversified Realty
• Acres	52
• Housing (units)	
• For-sale	no
• Rental	372
• Retail	300,000 (sf)
• Office	200,000 (sf)

Image: Crosland

Source: EPA Smart Growth Capital Report (draft)

Middleton Hills, Middleton, WI



- Developer Marshall Erdman & Associates
- Acres 140
- Housing (units)
 - For-sale 400
 - Rental planned
- Retail 41,000 (sf)
- Office/Industrial 13,000 (sf)
- Other amenities include park and preserved wetlands and lakes, parks, and green.

Image: City of Middleton

Redevelopment/Re-Use

- Acreage: 15 to 150
- For Sale Housing Range: 23 to 2,000 units
- Rental units: 0 to 1,600 (average range)
- Retail/Commercial (sf): 300,000 – 3,000,000
- Primary use: None. Site and market specific.

Carlyle, Alexandria, VA



- Developer JM Zell Partners
- Devel. Cost \$660 M (2001-2003 est.)
- Acres 77
- Housing (units) 1.885 M (sf)
 - Rental, condominium, townhouse
- Developers: LCOR, Crescent Resources, Post Properties, Cousins Properties, others
- Retail 375,000 (sf)
- Office 4.225 M (sf)
- Hotel 300,000 (sf)
- Other amenities include four parks, waterfront district, federal courthouse, Patent & Trade Office

Atlantic Station, Atlanta, GA



- Developer Jacoby Development Inc
AIG Global Real Estate
Investment Corp
- Total Cost (est.) \$2 B
- Acres 138
- Housing (units) 3,000 – 5,000
 - For-sale yes
 - Rental yes
- Builders: Beazer Homes, Lane Companies,
others
- Retail 2 M (sf)
- Office 6 M (sf)
- Hotel (rooms) 1,000
- Other amenities include 11 acres of parks
and open space, One LEED office building
(Silver), shuttle to MARTA station.

Urban Infill <15-acres



Market Common, Arlington, VA



Rockville Town Square, MD



Uptown District, San Diego

Market demand for smart growth is already here

- **Consumer surveys show about one-third of the home buying market wants the smart growth product**
 - Private sector reports (Robert Charles Lesser & Co. Compiled 2007)
 - Regional/Metropolitan organizations preference surveys (SMARTRAQ (Atlanta). 2006.)
 - Smart growth studies (SGA/NAR. 2004)
 - Homebuilder surveys (NAHB. 2002)
 - Academic research (Dowell Meyers. 2001)

Supply/Opportunity gap for smart growth

- 71 smart growth projects as total share of US housing market from 1Q2000 – 2Q2004: .43%
- New units for 2008: 905,359
- Consumer preference to buy SG: 33%
- **2008 supply gap: ~300,000**
- **The market for smart growth is here!**

Source: EPA White Paper: The Market for Smart Growth. Gregg Logan, Robert Charles Lesser & Co. 2007, and US Department of Commerce.

Demographics and consumer preference, today and tomorrow

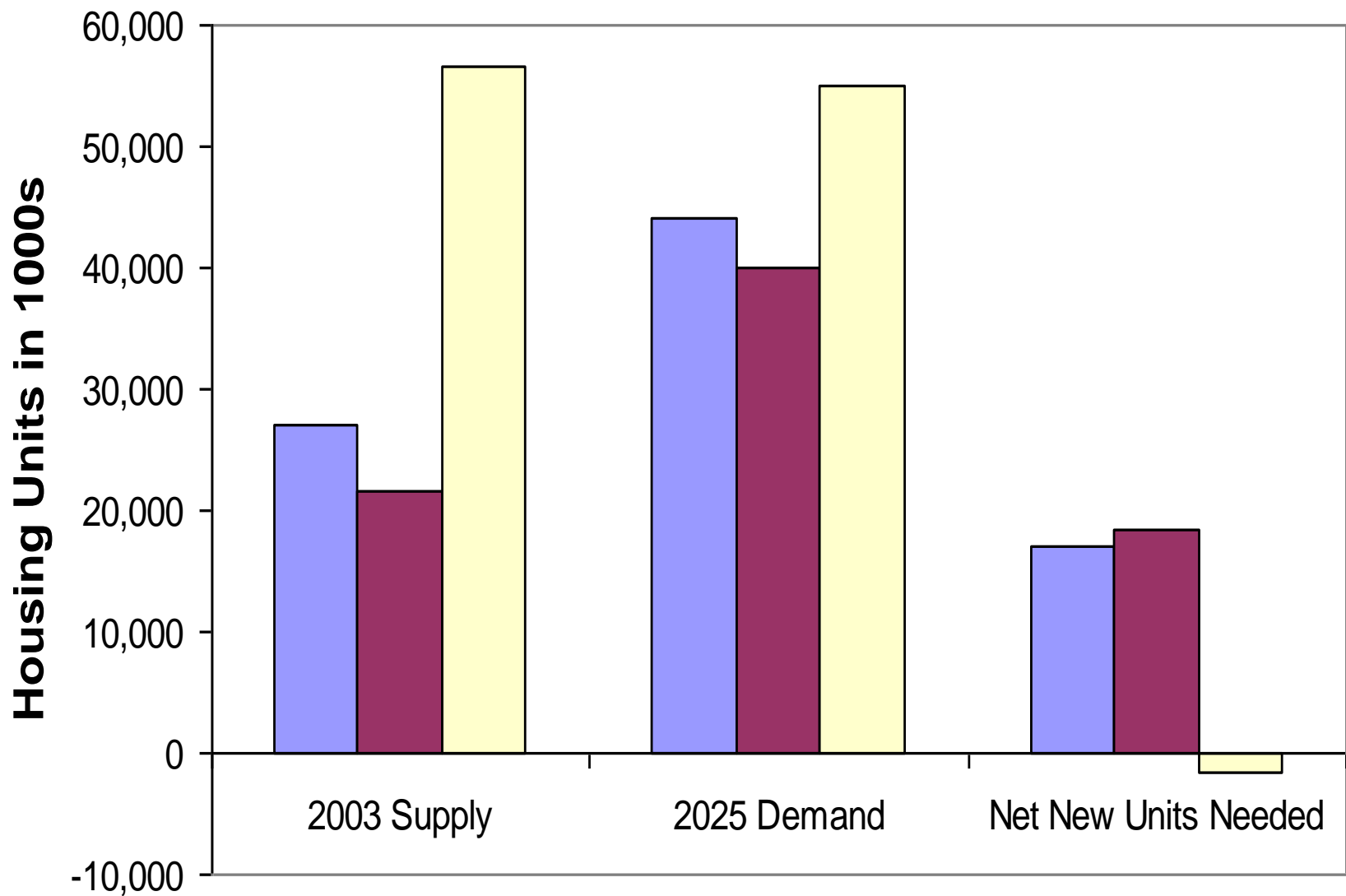
- Consumer demand for smart growth is one-third of all home buyers and growing
 - Based on projected growth in demographic cohorts, demand for smart growth housing expected to increase. Preference favors attached housing and small lots. Existing supply of large lot housing meets all demand through 2025.

- The definition of the “family” unit is changing quickly

<u>Households</u>	<u>2000</u>	<u>2025</u>
With Children	33%	28%
Without Children	67%	72%
– <i>Single person households</i>	26%	28%

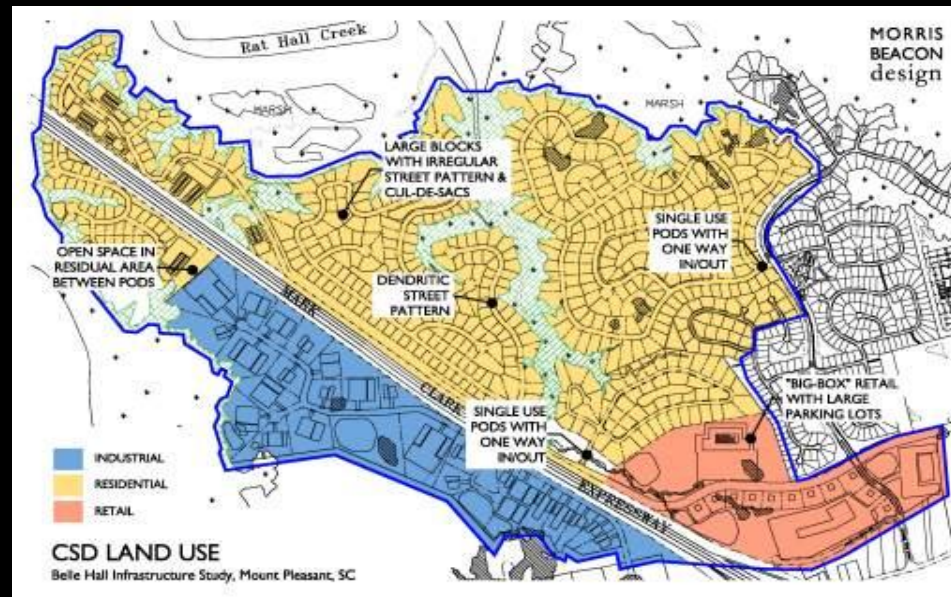
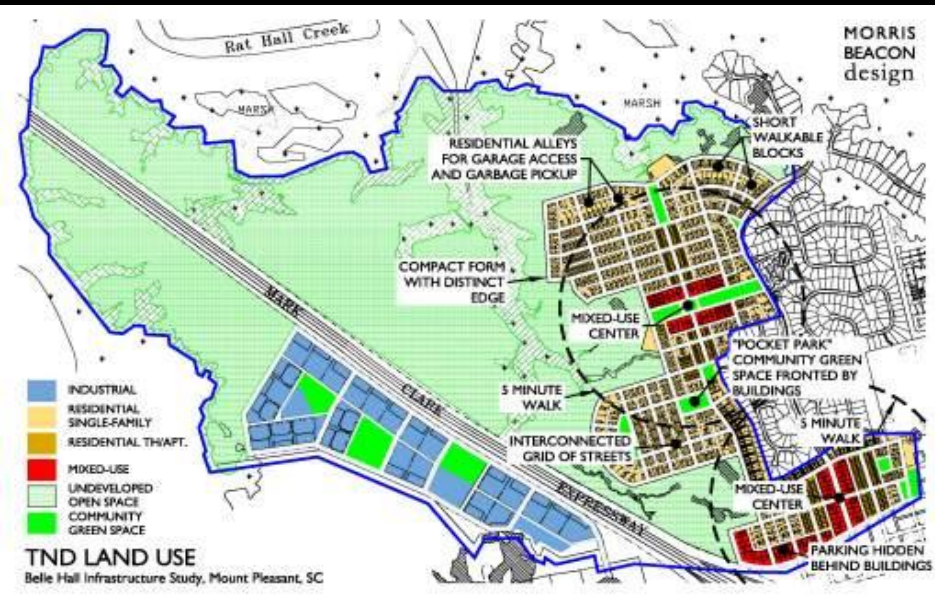
Source: Leadership in a New Era. Arthur C. “Chris” Nelson, JAPA, 2006.

See also EPA White Paper: *Where Will Everybody Live?* Arthur C. “Chris” Nelson, Virginia Tech. 2007.



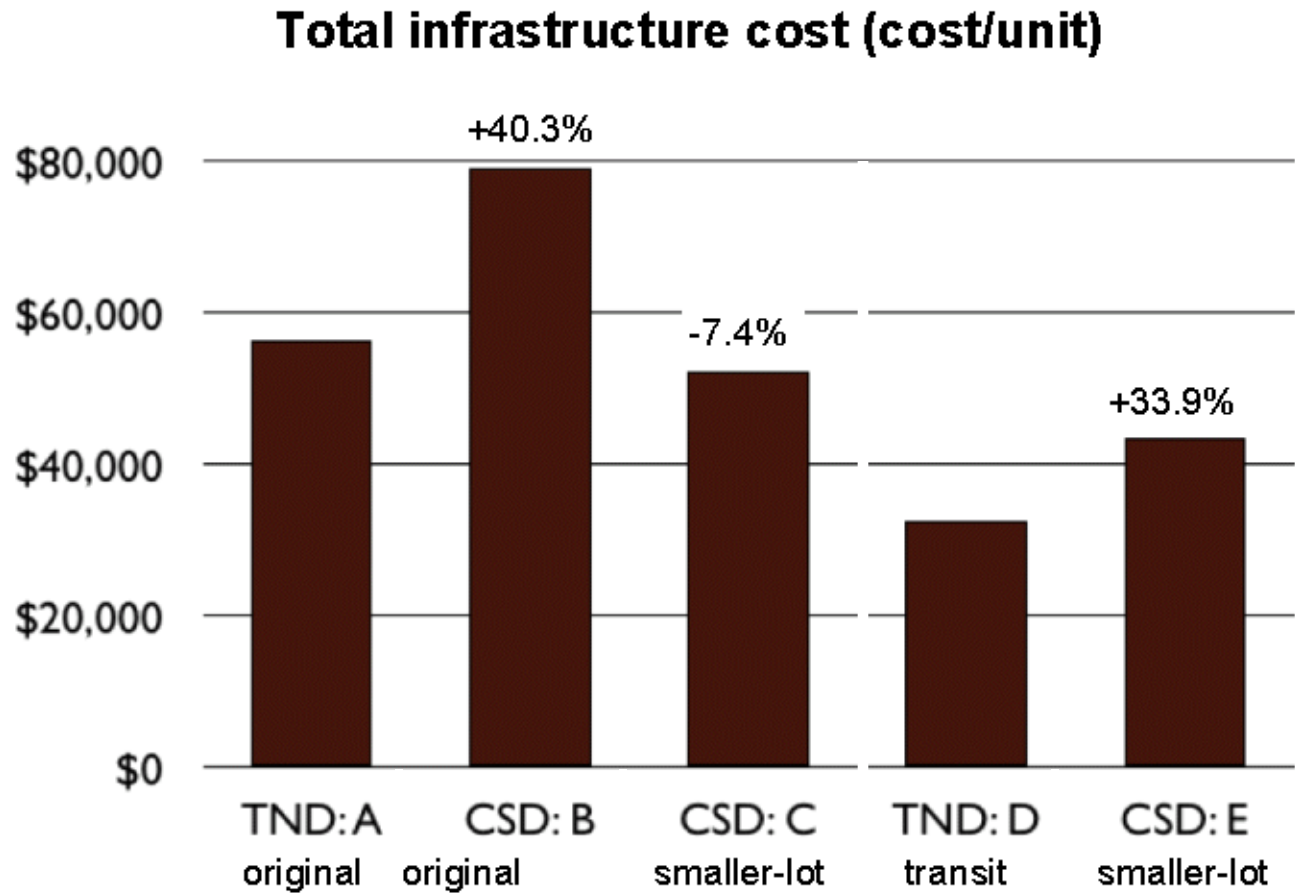
Source: EPA White Paper: Where Will Everybody Live? Arthur C. "Chris" Nelson, Virginia Tech. 2007.

Infrastructure: which costs more?



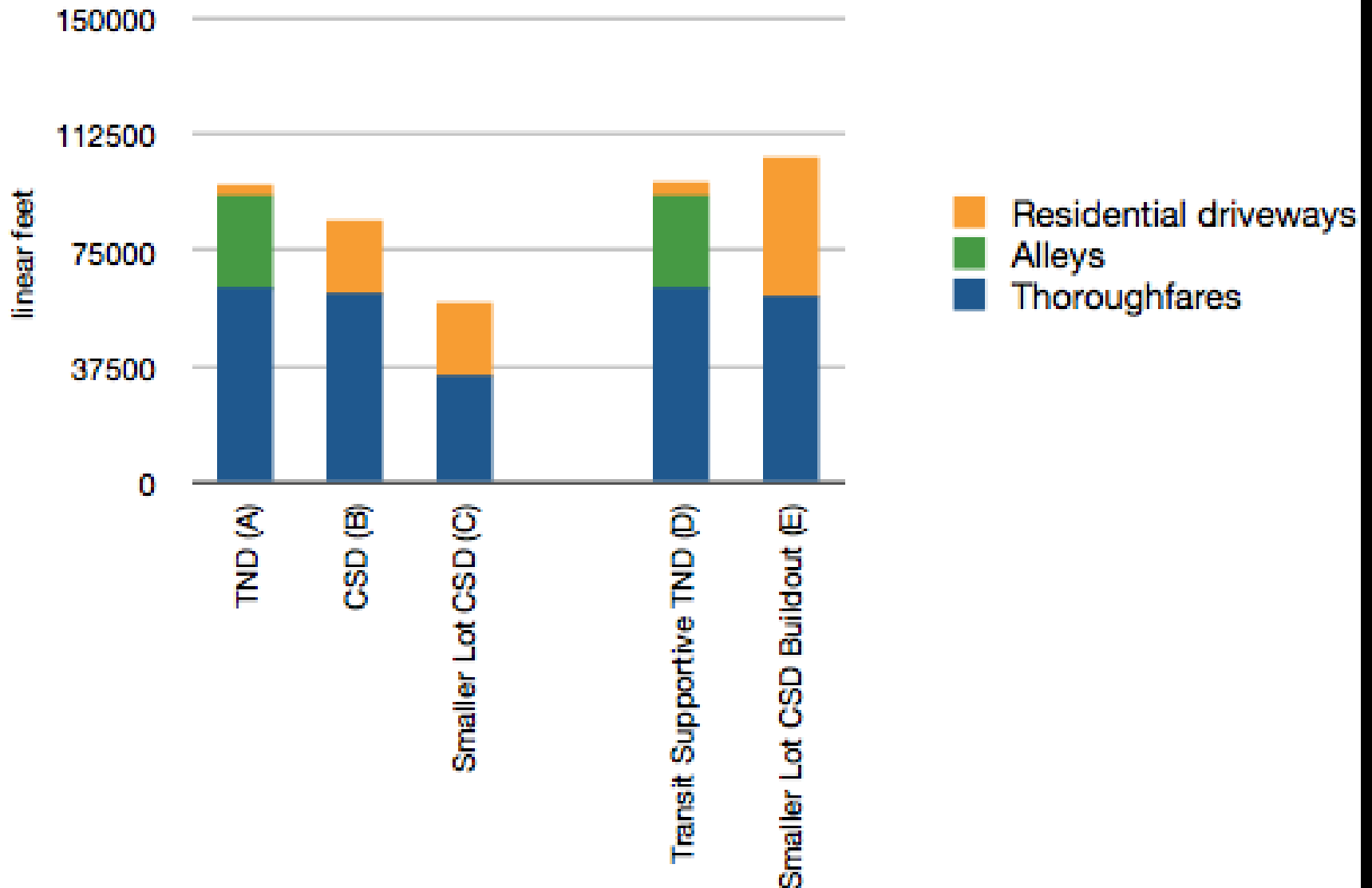
It depends... but, costs are measurable!

Making the case: Infrastructure



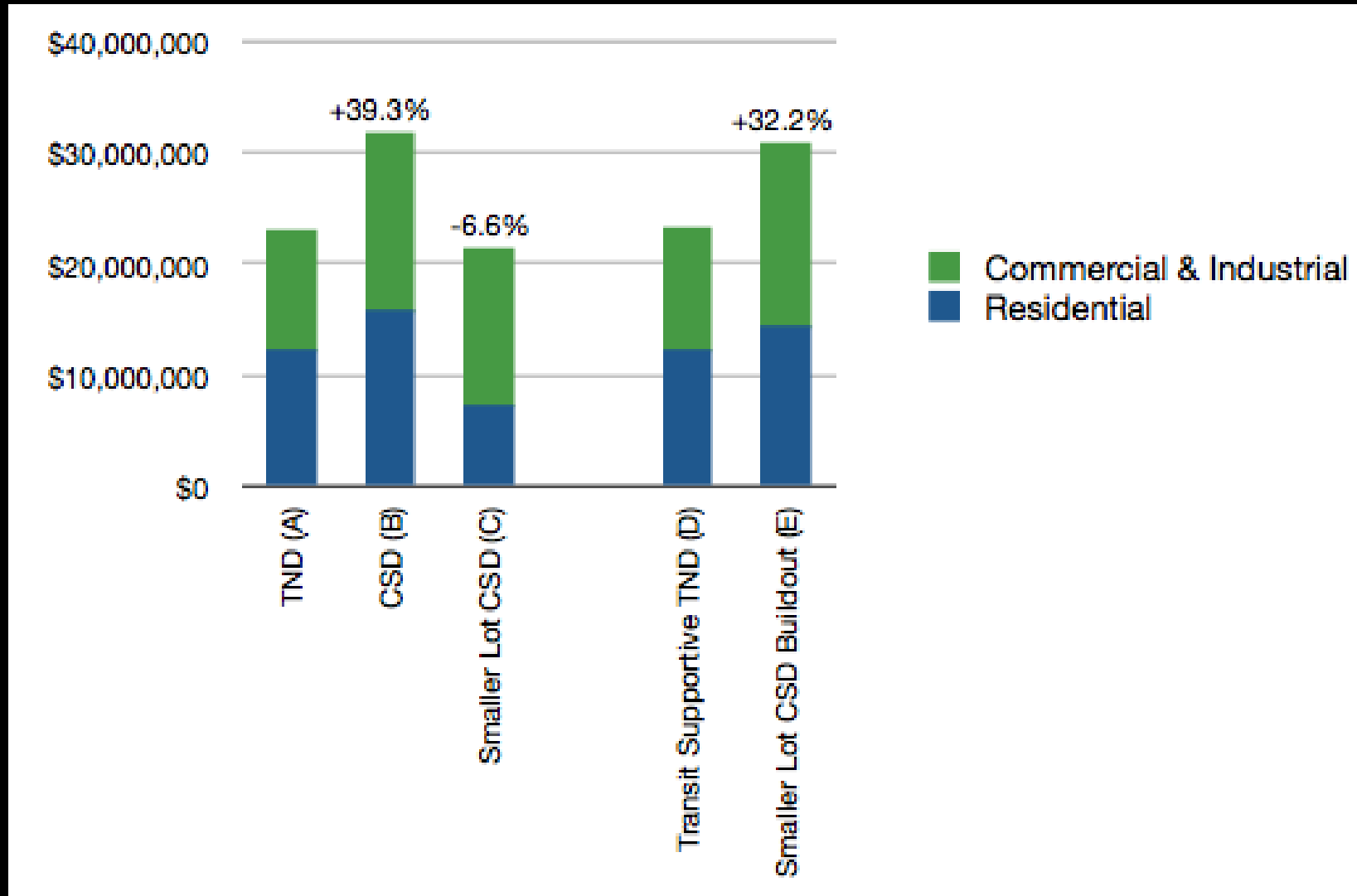
Making the case: Infrastructure

Thoroughfares, Alleys, & Driveways



Making the case: Infrastructure

Thoroughfares, Alleys, Driveways, & Parking



Housing is more cost efficient

Cost Efficiencies of Production Home Construction Elements

Construction Element	Cost-Neutral	Smart Growth	Conventional
Site planning			√
Footprint size and configuration		√	
Foundation - Slab		√	
Foundation - Stem-wall	√		
Exterior corners		√	
Roof pitches	√		
Exterior doors	√		
Exterior windows		√	
Ceiling heights		√	
Decks and porches	√		
Exterior details	√		
Quality of materials and finishes	√		
Front elevation variety		√	
360° vs. 90° architecture	√		
Interiors	√		
Garage configuration		√	
Garage - attached/detached			√
Setbacks ("build-to lines")		√	
Floor area and design		√	
Systems approach	√		



Market acceptance of smart growth

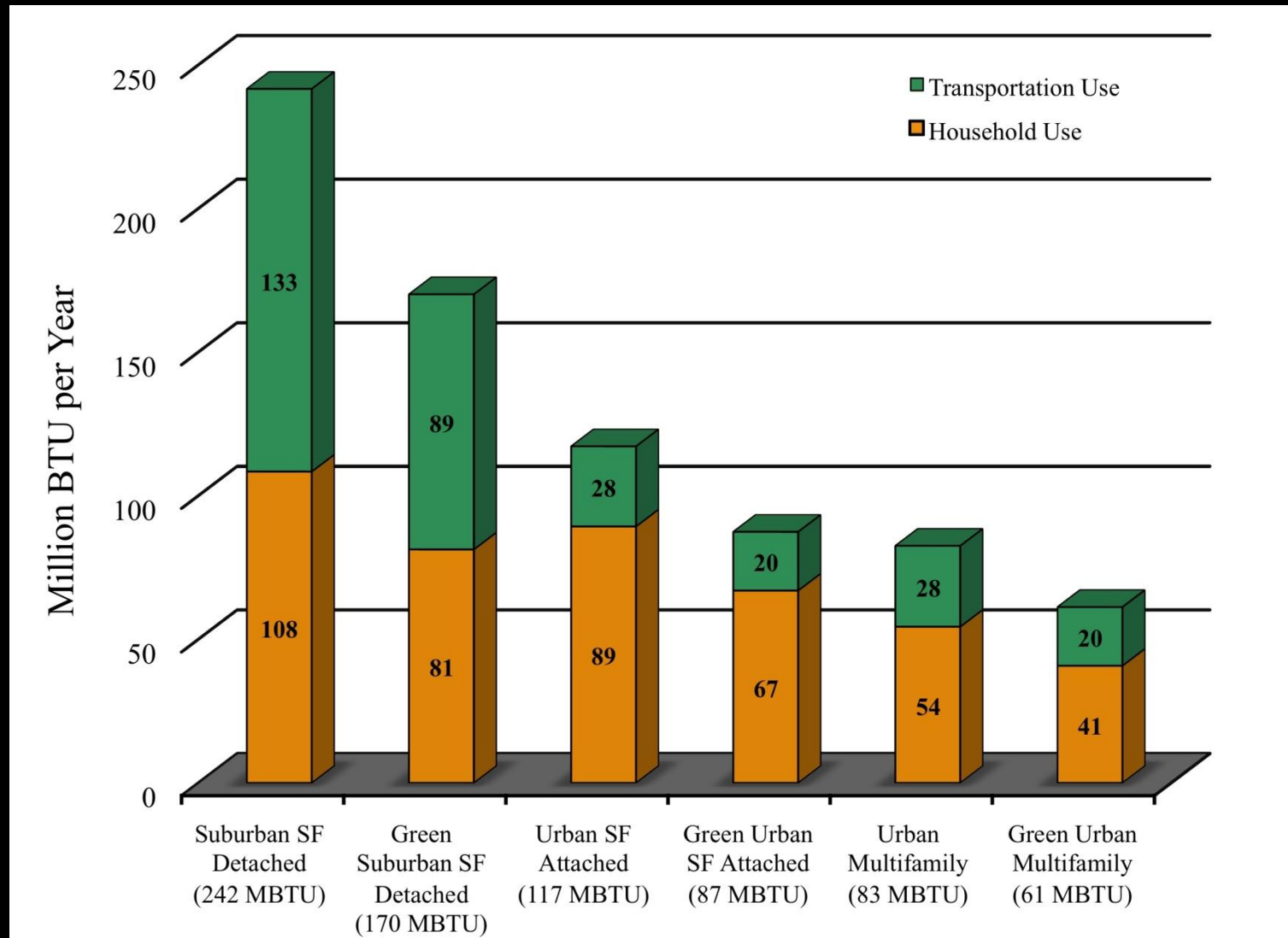
- Valuing the New Urbanism (Eppli & Tu. 1999.)
 - 13% price premium for Kentlands, 1995 - 1997
- Updated paper by Eppli & Tu, 2007
 - Kentlands, Lakelands, and entire 20878 zip code
 - 4,744 resales between 1997 - 2005
 - Kentlands 16.1% price premium
 - Lakelands 6.5% price premium

Source: EPA White Paper: Market Acceptance of Single-Family Housing Units in Smart Growth Communities. Mark Eppli, Charles Tu. 2007.

Premiums for urbanism and density

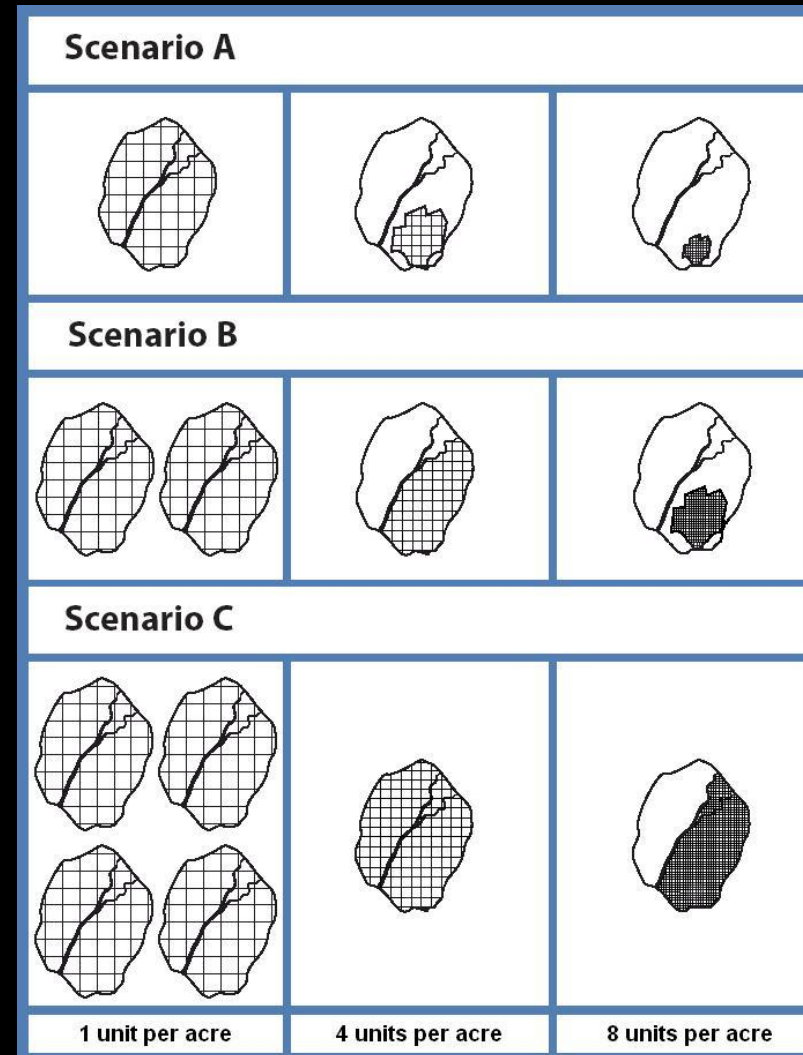
- Urban SFD versus Suburban SFD: 100 – 150%
- Urban infill condo units versus Urban SFD: 40%
- Urban infill condo units versus Suburban SFD: 51 – 200%
- Case study markets (2007):
 - Denver and Highland Ranch
 - Seattle and Kirkland
 - New York City and Westchester County
 - Detroit and Birmingham

Energy efficiency and location: Urban vs. Suburban “Green”



Housing density and water quality

- All scenarios and densities use 10,000 acre watershed units
 - Scenario A: **10,000 housing units in 2000.**
 - Scenario B: **20,000 housing units in 2020.**
 - Scenario C: **40,000 housing units in 2040.**



Arlington County, Virginia





Thank You

EPA Smart Growth Program

www.smartgrowth.org

